AMENDMENTS TO THE DRAWINGS

The attached sheet of drawing is new.

Attachment(s): New Sheet Fig. 32.

REMARKS

This paper is responsive to the Non-Final Office Action dated May 18, 2005. Claims 1-17 were examined. Claims 1-17 remain present in this application all of which have been rejected. Applicants have added new claims 18-20. Support for new claims 18-20 may be found in the specification at, for example, page 64, paragraph 1266.

In the present Office Action, the drawings were objected to under 37 CFR §1.83(a); claim 9 was objected to under 37 CFR §1.75(c); claims 1-17 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,812,798 (hereinafter "Moyer"); and claims 1-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of U.S. Patent No. 5,255,374 (hereinafter "Aldereguia") and Moyer.

In response to the drawing objections related to claims 1, 7, 8 and 13, Applicants have submitted herewith a new Fig. 32, which is fully supported by the specification beginning at page 64 (paragraph 1266) through page 70 (paragraph 1293). Applicants further submit that the drawing objections with respect to claims 1, 7, 8 and 13 are now moot. With respect to the additional drawings objections related to claims 8 and 12, Applicants submit that Fig. 4 clearly shows a link interface that includes a receive controller and a transmit controller and may further include a link bridge register (see Fig. 31) that is programmable and may include four separate fields that allow for setting a receive width, a maximum receive width, a transmit width and a maximum transmit width (see also page 64, paragraph 1266). Thus, with respect to claims 8 and 12, Applicants respectfully submit that the drawings meet the requirements of 37 CFR §1.83(a). With respect to the objection to claim 9, Applicants have amended claim 9 to address the objection and, as such, submit that the objection to claim 9 is now moot. Applicants have also amended claim 17 to refer to the "interface" of claim 13.

Claim rejections under 35 USC § 102

At the outset, Applicants note that in order for a reference to anticipate a claim, the reference must disclose all limitation of the claim. Applicants believe that a brief review of one embodiment of Applicants' claimed subject matter may help move this case toward allowance.

With respect to independent claims 1, 8 and 13, Applicants' claimed subject matter is generally directed to a communication link interface that includes a transmit portion that allows for the setting of a transmit width and a receive portion that allows for the setting of a receive width. As is set forth in paragraph 1266 of Applicants' specification, upstream and downstream links with registers include four separate fields, i.e., a receive width field, a receive maximum width field, a transmit width field and a transmit maximum width field. As is set forth in paragraph 1267 of Applicants' specification, in one embodiment a BIOS is utilized to program the width field of the transmit controller on side A of the link to match the width field of the receive controller on the B side of the link. In general, the width fields are programmed to be the lesser of the maximum width values on the two sides. In this embodiment, the BIOS also programs the width field of the transmit controller on side B of the link to match the width field of the receive controller on side A of the link in a similar fashion. In this manner, integrated circuits can implement different size data buses for the transmit and receive controllers and still be able to communicate with other IC links having different size data buses.

With specific reference to Applicants' Fig. 4, an exemplary communication link, including a data bus, a link interface side A and a link interface side B, is depicted. In contrast to Applicants' claimed subject matter, Moyer addresses data bus load imbalance, which may cause poor timing and increased power consumption, on a set of integrated circuit terminals of a data processor. Specifically, as is set forth in Moyer (column 3, lines 20-26), the ability to control the position of data provided by an external device on a data bus of a data processor dynamically and in response to a memory location currently being accessed allegedly provides functional flexibility without increasing overhead cost or power consumption. More specifically, with reference to Moyer column 7, table 1, and column 6, lines 29-65, by setting appropriate data port size (DSZ) bits, a balanced load may be provided to a data processor. For example, DSZ bits can be selected to provide 8 bits on data lines D31-D24, D23-D16, D15-D8, or D7-0; 16 bits on data lines D31-D16 or D15-D0 or 32 bits on data lines D31-D0.

While Moyer allows for defining a data bit width of a device data port, Moyer does not teach, nor does Moyer suggest, setting both a transmit width of a transmit portion of a link interface and a receive width of a receive portion of the link interface. In sum, Moyer merely discloses programming a DSZ value stored in one of a plurality of control registers 94 to

configure a data processor 10 to communicate either 8, 16 or 32 bit data via an appropriate byte lane or plurality of byte lanes, depending upon an external device accessed (see Moyer column 12 lines 15-20). Furthermore, Moyer does not teach or suggest a communication interface that includes a link width register that includes both receive width and transmit width fields. For at least the above reasons independent claims 1, 8 and 13 are allowable over Moyer.

Claim rejections under 35 USC § 103

With respect to his rejection of claims 1-17 over the combination of Aldereguia and Moyer, Applicants respectfully submit that Aldereguia adds nothing to Moyer of relevance to Applicants' claimed subject matter. More specifically, Aldereguia is merely directly to a bus interface unit (BIU) that includes translation logic (buffers) for temporarily storing, in response to a predetermined set of operating conditions, data transferred between a system bus and an I/O bus through the BIU. The buffers are provided to allow data written from a faster system device to a slower I/O device to be temporarily stored. In sum, Applicants submit that neither Aldereguia or Moyer, alone or in combination, teach or suggest setting both a transmit width of a transmit portion of a link interface and a receive width of a receive portion of the link interface. For at least the foregoing reasons independent claims 1, 8 and 13 are allowable over the combination of Aldereguia and Moyer. Furthermore, applicants submit that dependent claims 2-7, 9-12 and 14-20 are also allowable for at least the reason that they depend upon allowable claims.

In summary, claims 1-20 are in the case. All claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone; the Examiner is requested to call the undersigned at the number listed below.

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that, on the date shown below, this correspondence is being

☒ deposited with the US Postal Service with sufficient postage as first class mail and addressed as shown above.

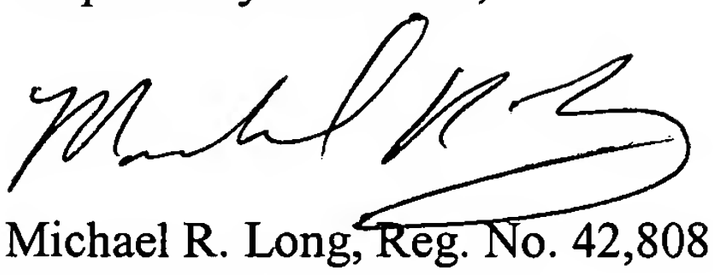
☐ facsimile transmitted to the US Patent and Trademark Office.

Michael R. Long — 08-18-05

Michael R. Long — Date

EXPRESS MAIL LABEL: _____

Respectfully submitted,



Michael R. Long, Reg. No. 42,808
Attorney for Applicant(s)
(512) 338-6324 (direct)
(512) 338-6300 (main)
(512) 338-6301 (fax)